

USAWC STRATEGY RESEARCH PROJECT

**THE DEFENSE DISTRIBUTION CENTER'S FUTURE ROLE IN THEATER
DISTRIBUTION OPERATIONS**

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ABSTRACT

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This research paper analyzes how incorporating an intra-theater logistics capability into the mission set of the Defense Distribution Center (DDC), a subordinate Field Agency of the Defense Logistics Agency, would enhance theater distribution. It further examines how incorporating intra-theater distribution into the mission set of the DDC would enhance the combatant commander's ability to effectively and efficiently execute the requirements of our National Military Strategy. In addition to exploring how the Defense Distribution Center's far reaching capabilities and distribution related core competencies present a unique opportunity to significantly improve intra-theater theater distribution; this paper also examines other strategic implications, such as the positive impact on strategic and theater airlift, transportation cost-avoidance, and the enhanced readiness of intra-theater distribution capabilities. This research paper concludes with specific recommendations for integrating Defense Distribution Center capabilities across all Combatant Commands using the Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel, Facilities (DOTMLPF) construct as a framework for identifying specific actions and organizational structures.

THE DEFENSE DISTRIBUTION CENTER'S FUTURE ROLE IN THEATER DISTRIBUTION CENTER OPERATIONS

With an effective intra-theater distribution capability, one that can fully integrate strategic to tactical distribution requirements, the combatant commander gains visibility and control over the critical resources required to execute the requirements of our National Military Strategy. From the combatant commander's perspective, the theater distribution portion of the pipeline is the most important segment of the overall distribution system. It is the critical juncture between strategic, operational, and tactical logistics capabilities and provides the primary conduit for the flow of personnel, equipment, and materiel entering or exiting the theater.¹ Unfortunately, theater distribution organizations employed today are cobbled together in an ad hoc fashion and for the most part, lack the capability to track and manage the flow of materials coming out of the defense distribution pipeline. As a result, the combatant commander loses flexibility and is often forced to allocate critical airlift assets against sustainment requirements instead of deploying combat formations. The Defense Distribution Center (DDC), a subordinate field agency of the Defense Logistics Agency (DLA), offers a set of unique modular capabilities that if successfully integrated into the intra-theater distribution system, would enhance the combatant commander's ability to maintain visibility and control, reduces the need for expensive strategic airlift, and significantly improves theater distribution readiness and effectiveness.

Background

Theater distribution is just one segment of a larger defense distribution pipeline that is broken down into three segments: 1) The Defense Logistics Agency (of which the Defense Distribution Center is a subordinate activity) and other national providers, operate the supply and depot system in support of Joint forces at the strategic level; 2) United States Transportation Command (USTRANSCOM) manages the Defense Transportation System (DTS) and is responsible for the transportation of sustainment requirements from the industrial base to the theater of operations via surface and air transport; 3) The theater distribution system, is specifically designed to support the Combatant Commander's (COCOM) operational requirements within his designated area of operations (AOR), and is typically resourced by Service component units from the port of debarkation (POD) to final destination, or point of need.²

By law, Service components execute theater distribution responsibilities at the operational and tactical levels by exercising their responsibilities under U.S. Code, Title 10. Specifically, U.S. Code Title 10 stipulates that each Service is responsible for providing its own logistics

support. However, in some cases, as directed under a supported Combatant Commander's (COCOM) directive authority for logistics, a single Service may be designated as the lead Service in supporting all other U.S. Services, or a Multi-nation effort, using previously established executive agent responsibilities and cross-servicing agreements.³ The Army has typically filled this role for the other Services by providing an ad hoc organization. Defense agencies, such as the DLA's Defense Distribution Center (DDC), are occasionally directed to support the COCOM's theater requirements, although they too have been historically assigned missions in an ad hoc manner. Although successful to a limited degree, this "catch as catch can" approach has resulted in a reliance on ad hoc organizations that routinely lack standardization in structure, command and control, information systems, clear budget lines, or policies and procedures. As a result, the overall system is woefully sub-optimized, and a significant measure of capacity, control, visibility, and certainty are sacrificed.

Historical Perspective

The historical examples below help to illustrate the sub-optimized and ad hoc nature of theater distribution operations, while at the same time pointing out how the Defense Distribution Center has gradually expanded and aided in the theater distribution process over the past three years. This historical perspective forms the foundation, or jumping off point, for a recommended "way ahead" for further integrating intra-theater distribution responsibilities into the Defense Distribution Center's deployable capabilities.

Operation Desert Shield/Storm

Operation Desert Storm (ODS) is an example of a sub-optimized theater distribution system that lacked adequate visibility, capacity, and control in the early stages of employment. The ODS theater distribution system based its center of gravity on large stockpiles of supplies, articulated in days of supplies (DOS), positioned throughout the theater at the various operational levels to ensure an item was readily available when needed.⁴ It was thought at the time that large stockpiles would reduce the risk associated with a tenuous transportation infrastructure supporting the supply chain. However, due to a lack of visibility and control over the stockpiles, many full containers went unopened and unused while units continued to requisition items against perceived shortages.⁵ In one recorded case, the Army's Material Management Center located in Saudi Arabia reported that they had zero visibility over on-hand stocks from the Division and below levels and were virtually "operating in a vacuum deciding how much of an item to order."⁶ To exacerbate the problem, theater distribution capabilities were selectively sacrificed in the ODS deployment flow in order to make room for additional

combat formations. Therefore, the theater lacked a cohesive capability to gain visibility over incoming shipments, consolidate and segregate shipments inside the theater based on shifting priorities, or effectively coordinate for onward transportation to customer locations. This meant the Defense Logistics Agency was forced to prepare, palletize, and prioritize shipments from their facilities in the United States without clear guidance on priority of shipment.⁷ As a result, it became very difficult to distinguish between shipments that were truly high priority and in short supply over any other shipments entering the theater. Forward deployed DLA capabilities (employed later in OIF) could have significantly improved the theater's logistics capacity and ability to gain visibility and control over ever increasing stocks in theater. The immediate impact of increased visibility and control includes a reduction of strategic airlift required to ship "high priority" requests, an increase in the availability of aircraft for deploying units, and a compression of the time required to fully integrate combat formations.

Operation Iraqi Freedom

Although Operation Iraqi Freedom (OIF) began with its own set of unique challenges for DLA and the Defense Distribution Center (DDC), the theater distribution system that is in place today in the CENTCOM AOR includes several innovations and improvements over the theater distribution system used in ODS.⁸ Most importantly, the theater structure supporting OIF has transitioned away from a supply-based logistics approach and adopted what is commonly known today as distribution based logistics (DBL). Distribution based logistics requires that only "limited inventory is employed to cover consumption between replenishment and any unforeseen disruptions in the flow of the distribution pipeline."⁹ In general, success is achieved via increased velocity (reducing customer wait time), improved visibility, and improved theater capacity and control in managing the configuration and flow of sustainment from the strategic level down to the tactical level, or point of delivery. In this regard, the Defense Distribution Center made several advancements in the area of distribution based logistics during OIF, and as a result is better postured to incorporate an intra-theater distribution mission set in the near future.¹⁰

Defense Distribution Center Advancements (OIF Theater Distribution)

The following DDC initiatives are offered as examples of capabilities that should be considered by the Army and the Joint logistics community for potential integration into future theater distribution designs. These examples also form the foundation for recommendations identified in the "the way ahead" section of this paper.

Class IV (Construction and Barrier Material) Support from Bahrain

During the initial phases of OIF, units placed a high demand on construction materials used to build simple structures and barriers for security stand off. These materials are generally very heavy and expensive to transport by air versus surface. However, due to the high demand and criticality of the materials, CENTCOM had no other option initially but to use critical strategic air frames at an exorbitant cost to transport these materials to the theater via air.¹¹ To remedy this situation, the DDC worked with the CENTCOM J4 staff to develop a plan that would establish a forward distribution center for Class IV materials in Bahrain.

Distribution Depot ZZ, or DDZZ for short, was established in a few short months under a contractual arrangement with a commercial freight forwarding company and set up operations in the commercial port of Bahrain under the direct management of DDC personnel. DDZZ provided commodity-pure 20 foot containers of material for 23 high demand national stock numbers (NSN) and maintained visibility using the DDC's Distribution Standard System (DSS) and radio frequency identification tags (RFID).¹² Once an item was requisitioned and a material release order (MRO) was established, full containers of a single commodity were transported to Kuwait via commercial feeder vessels or Army watercraft stationed out of Kuwait Naval Base (KNB), Kuwait, and linked up with ground transportation at the Army's Theater Distribution Center located in Kuwait for further distribution to final destination.¹³

In 2004 alone, the DDZZ forward distribution center initiative freed up hundreds of air frames and processed over 30 million pounds of Class IV material to Kuwait and Iraq at considerable cost avoidance.¹⁴ In addition, customer wait time (CWT) was reduced by 50 days for those items normally shipped by ocean-going vessels, and shaved four days off the air transit time.¹⁵ As a result, the forward distribution center's proven reliability in meeting vastly improved delivery parameters boosted confidence levels in the theater and reduced the effects of re-ordering and stockpiling that had plagued the distribution system of ODS. The success of operations like DDZZ proved that DLA and DDC can positively impact the early flow of heavy and bulky high demand materials into the theater while still meeting the customer's expectations for timely delivery. The early establishment of a forward deployed stock capability like DDZZ also provides the benefit of reducing transportation costs (low cost of surface versus the high cost of air) while freeing up valuable strategic airframes required for unit deployments, routine rotations, or to support other short-notice contingencies within the combatant commander's area of responsibility. This type of predetermined, forward-based capability should be integrated into future plans for supporting large scale contingencies.

Establishment of Distribution Depot Kuwait, Southwest Asia (DDKS)

The combined success of providing Class IV through DDZZ in Bahrain and the opening of an overland route from Germany to northern Iraq made it possible for DDC and CENTCOM to consider the possibility of establishing a larger forward distribution center in Kuwait.¹⁶ This new distribution depot would stock and process not only Class IV, but Class II (clothing and textiles), Class III-packaged (packaged petroleum products), and Class IX (repair parts) as well. In close coordination with CENTCOM, the Defense Logistics Agency made a commitment to establish a depot capability inside Kuwait by August 2004. The resulting contract with Public Warehouse Company of Kuwait officially established DDKS and marked the first time that a defense distribution depot was established using a purely commercially owned facility.¹⁷

Located just 15 kilometers north of Camp Arifjan, Kuwait, and within close proximity of Kuwait City International Airport (KCIA) and Shuwaik commercial ocean port, the depot facility includes over one million square feet of enclosed warehouse space and over one million square feet of open storage space.¹⁸ At the time it was established, this capability was considered highly significant given existing government owned warehouse complexes in the theater were already in high demand. Established in just six months via a contingency contract, DDKS was expected to operate just like any other DDC depot in that it would have the ability to receipt, stow, and issue Class II, IIIP, IV, IX, and hazardous materials. Although initially focused on providing materials to units located only in Kuwait and Iraq, DDKS quickly expanded its support to include all Services located throughout the entire CENTCOM area of operations.¹⁹ However, like other forward positioned depots in Germany, Korea, and Italy, DDKS was required to use theater provided transportation, and initially, channeled its deliveries through the Army's Theater Distribution Center (TDC); essentially an added seam in what was already a sub-optimized system.

From the strategic perspective, positioning a distribution depot like DDKS in the theater significantly improved the theater distribution system by avoiding the need to dedicate thousands of strategic air frames against the movement of sustainment material that was now moving by surface routes. Within the first three months of operation, the facility processed over 25 million pounds of material that would have otherwise been shipped by strategic airframes.²⁰ As with DDZZ in Bahrain, this produced significant cost avoidance in transportation related costs and resulted in freeing up aircraft to better support the combatant commander's operational rotations. As of January, 2006, the flow of this material by surface versus air represented a cumulative cost avoidance of over \$314M. By January, 2007, the cumulative cost avoidance increased to over \$744M.²¹ In operational terms, the accumulative total of 307 million

pounds of material processed and shipped from the depot would have required 4,995 C-17 equivalents to move the same amount of material by air; a significant amount of strategic lift that could now be made available to fill other national priorities across the combatant commands.²²

Consolidation of Army GS Base with DDC Depot Operation in Theater

Utilizing the DDC's forward stock capability early in a campaign is far more desirable than each Service taking care of their own individual needs without regard or visibility of redundant actions, which ultimately causes competition for valuable strategic transportation in the critical early phases of deployment. The forward positioning of a distribution depot in Kuwait allowed the Army to divest itself of several stock items and rely more heavily on DDKS to perform what had been traditionally viewed as a general supply mission for the Army. This change resulted in several immediate benefits for the Army and the theater distribution system as a whole. First, the Army was able to reduce its capital investment in stockpiling material and expensive parts in theater. Second, the Army was able to reduce the cost associated with contractor support required to run the affected warehouses, which eventually facilitated the full transition of services from an expensive contingency based contract performed under the Logistics Civil Augmentation Program (LOGCAP), to a fully competitive and less expensive sustainment contract.²³ Finally, DDKS was able to provide improved inventory and location accuracy which again, reduced the tendency of ordering customers to re-order needlessly or stockpile items in anticipation of shortages.

Establishment of the DDC Theater Consolidation and Shipping Point (TCSP)

In the early stages of OIF, the Army conducted theater distribution center (TDC) operations at Camp Doha, Kuwait. At the onset of the operation, the Army had to rely upon a small contractor run cargo receiving and shipping point (CRSP) because the GS Supply unit that was designated to perform the mission was pushed back in the deployment flow.²⁴ The CRSP was initially designed and staffed to serve only those units located in Kuwait and as a result, was quickly overwhelmed with the requirement to process shipments for Iraq as well. Eventually, the Combined Forces Land Component Command (CFLCC) C-4 directed that a GS Supply unit take on the mission, along with several other supporting activities, to form what came to be known as the theater distribution center (TDC).²⁵ The TDC was eventually designated as the hub of all dry cargo distribution for the theater, and as a result, a huge backlog was created due to a shortage of ground transportation and a lack of visibility of shipments transiting the facility. Over time the mission was transitioned to the LOGCAP

program and relocated from Camp Doha to Camp Arifjan in an effort to consolidate government support activities.²⁶

Although considered a critical cog in the theater distribution system by senior logisticians in the theater, the theater distribution center (TDC) was never designed or organized with a specific capability in mind, but rather, it was pieced together in an ad hoc fashion and given limited capabilities to react to the latest crisis at hand.²⁷ To remedy the situation, the CENTCOM J4 requested that DDC look at the OIF theater distribution mission to determine the feasibility of creating an organization specifically designed to handle the distribution mission of dry cargo transiting through Kuwait.²⁸ The CENTCOM J4 believed that DDC's core competencies, specifically receipt, storage, issue, packing, preservation, worldwide transportation, and in transit visibility, were a good fit for the TDC mission.²⁹ In less than a year, the DDC awarded a fully competitive sustainment contract to Kellogg, Brown & Root to operate the theater consolidation and shipping point (TCSP), formerly known as the theater distribution center (TDC), and officially relieved the Army's 143rd Transportation Command and LOGCAP of their responsibility for the mission.³⁰

The TCSP is designed to act as the primary conduit for dry cargo materials (primarily Class II, IIIP, IV, and IX) entering the theater of operations and coordinates for the onward movement of material with theater transportation managers.³¹ The TCSP is currently manned with a full time staff that includes one 05 commander and 10 DOD civilians who oversee the day to day operations performed by a civilian contractor. Critical mission equipment, such as container handlers, forklifts, and portable buildings purchased under the LOGCAP program were retained by DDC and incorporated into the TCSP contract as government furnished equipment. All dry cargo entering the theater, less strategic configured air pallets flown directly to Iraq, pass through the TCSP and are checked by commodity and Department of Defense Activity Address Code (DODAAC) to ensure they are configured in the most efficient manner for onward movement. The TCSP further segregates, consolidates, or palletizes cargo as necessary and arranges shipments by "customer lane" to ensure the items are properly configured for intra-theater airlift or loaded onto trucks for onward movement. All material leaving the TCSP is marked with radio frequency or RFID tags to ensure continued visibility down to the tactical level.³²

As a subordinate element of the DDC, the TCSP has a distinct advantage over any ad hoc version of a theater distribution center. First, the status and visibility of materials due into the TCSP are greatly enhanced through the use of DDC's Distribution Standard System (DSS). DSS is an automated information system that "manages warehouse operations and provides

system functionality and visibility in receiving, storage, consolidation, packing, shipping, inventory, inspection, and workload management.”³³ The system also links other DDC organizations together via a central mainframe and allows customers gain real time status of requisitions ordered from DLA facilities via an easily accessible internet site. In contrast, the ad hoc theater distribution center run by the Army in OIF did not use a centralized information management system, nor did it have the ability to track inventory on the site or manage operational performance metrics.³⁴ Second, the TCSP government management team is highly experienced and seasoned in the distribution business. The vast majority of DDKS and TCSP employees who oversee the contract operation are seasoned Department of Defense civilian employees who possess years of previous experience working in the largest and most complex operations within the Department of Defense logistics system. Using an ad hoc system on the other hand, provides little to no operational continuity and experience during the critical stand up phases of the operation.

Enhancing Theater Distribution for the Future

An effective theater distribution capability operates across the entire distribution spectrum, is trained and ready prior to deployment, and enables the combatant commander to maintain visibility and control over materials and resources flowing from strategic level depots located within the United States, all the way down to the tactical point of need within the theater. In this way, the commander is able to minimize the logistics footprint, accurately prioritize support requirements, and make better use of strategic airlift to mission priorities. Ultimately, this improved ability to control intra-theater logistics adds to the combatant commander’s operational flexibility and enables him to effectively carry out theater specific missions in support of the National Military Strategy. Fully integrating the Defense Distribution Center into the intra-theater logistics system is a critical step toward enhancing the future of theater distribution.

The following recommendations outline a “way ahead” and justification for incorporating an intra-theater logistics capability into the mission set of the Defense Distribution Center (DDC). These recommendations build upon the operational initiatives and advancements demonstrated in Operation Iraqi Freedom and addresses specific actions, capabilities and organizational structures organized across the constructs of doctrine, organization, training, material, leadership and education, personnel and facilities (DOTMLPF).

Doctrine

Joint and Army doctrine on distribution operations should be revised in order to adequately address how defense agencies like the Defense Distribution Center, are “leveraged”

in order to enhance the overall capabilities at the strategic and operational levels. At the joint level, the Focused Logistics Joint Functional Concept addresses three overarching tenets that must be achieved in establishing a comprehensive logistics system.³⁵ Joint tenets include capacity, control, and certainty, while Army doctrine addresses similar tenets with a slight twist. Army doctrine also includes capacity and control, but uses visibility as the third tenet vice certainty.³⁶ Using these doctrinal tenets as a framework, the paragraphs below demonstrate how the integration of DDC capabilities may help in eliminating existing gaps and seams in the end-to-end distribution pipeline.

The first tenet of a viable distribution system addresses the idea that the overall pipeline must have sufficient capacity to support the end to end (strategic to tactical) requirements. If any one segment of the system is not properly calibrated to handle the desired flow of materials, the overall system is compromised and significant backlogs and delays result, as evidenced in the earlier discussion regarding the initial theater distribution center operations established in support OIF. The Army fully recognizes this problem and specifically states in its Distribution Operations for the Future Modular Force – Concept Capability Plan that “the Army lacks a comprehensive theater distribution structure...that's capable of integrating strategic to operational distribution...”³⁷ In this regard, the DDC's success in establishing a forward deployed distribution capability, coupled with a DDC-managed theater consolidation and shipping point capability, offers the joint community viable options for the future. Connecting a forward based depot facility that can receive, store, and issue, to a capability that can systematically segregate, consolidate, and cross-dock material shipped from the DDC's CONUS based depots, offers the joint community a unique opportunity to successfully integrate strategic to operational distribution and significantly enhance the capability of any future theater distribution system.

The second tenet of control addresses the ability to adequately track, shift and “potentially reconfigure-forces, equipment, sustainment, and support, even while en route, to deliver tailored logistics packages and sustainment directly to the warfighter.”³⁸ Expanding DDC's operational capability into the theater using a forward deployed depot and a theater consolidation and shipping point capability, will serve as a “pipeline calibration mechanism” at the strategic and operational levels, while minimizing the effects of backlogs and unforeseen spikes at the tactical level. Furthermore, connecting DDC's CONUS based depot operations with forward deployed DDC distribution capabilities will significantly improve velocity, reduce customer wait time, drive down transportation costs, and resource requirements.³⁹

The final tenets of certainty and visibility are mutually supportive. As Army doctrine points out, “the key to strategic distribution is visibility of requirements, priorities, resources and integration of effort across the Joint Deployment and Distribution Enterprise (JDDE)”⁴⁰ The tenet of certainty, as addressed in joint doctrine, points to the increased level of confidence that the warfighter feels when “support arrives where needed and on time-as a result of consistently demonstrated on-time delivery...”⁴¹ If successful, visibility and certainty work together to shift the warfighter’s focus away from the perceived need for visible stockpiles of materials, to a greater level of confidence in a distribution pipeline that is often only visible from a computer screen.

Finally, the integration of DDC forward based depot and theater consolidation and shipping point capabilities into the theater of operations significantly enhanced the visibility and certainty associated with the distribution pipeline supporting OIF. The DDC’s Distribution Standard System (DSS) coupled with inherent RFID capabilities, provides a common data base and query capability that logisticians can use to determine the status of requisitions ordered through DLA. Integrating DDC capabilities into the theater distribution system effectively expands the visibility of the pipeline from the strategic to operational level, thereby increasing the confidence level of those who rely on the system. These capabilities should be integrated into Joint and Army doctrine.

Organization

Theater distribution structures used in the past should be changed in order to reduce their ad hoc nature, improve deployability and responsiveness, and codify capabilities used by planners in building a reliable and predictable theater distribution structure. The Army has addressed many of these requirements in its Modular Force Logistics Concept, however, the integration and utilization of defense agency organizations, similar to those provided by DDC in OIF, were not addressed. Comments such as “leverage joint and strategic partners” or “close coordination with joint partners is required” represent the only discussion of potential integration of defense agency or DDC capabilities in the Army’s future modular logistics concept.⁴²

The Army plans to support future theater distribution requirements using its Sustainment Command (Theater) or SC (T) concept. Under this concept, the SC (T) is responsible for “establishing and executing the theater segment of the distribution system.”⁴³ This means that the SC (T) must be prepared to fully integrate the strategic to operational portion of the dry cargo distribution pipeline, a mission that may prove difficult without a “linking capability” like DDC’s distribution depot and theater consolidation and shipping point located in Kuwait. For example, the SC (T) does not currently possess a capability to track requisitions and shipments

from the national level to the point of distribution in theater, a capability that DDC is providing today in support of OIF. To remedy this gap, it is recommended that the Army and the Joint logistics community consider integrating a deployable version of DDC's distribution depot and theater consolidation and shipping point capability into any future theater logistics design. This deployable distribution capability, if employed early, would significantly reduce the requirement to cobble together units to perform the dry cargo distribution function, while at the same time eliminating the costly and highly disruptive need to transition the mission to a contractor or to DDC sometime later in the campaign.

Although still under development, the DDC has developed a concept for a deployable depot and theater consolidation and shipping point capability that could deploy into a theater, establish distribution operations, and plug into the existing command and control structures.⁴⁴ The DDC envisions a deployable depot organization that is modular and capable of providing "material distribution support tailored to meet Combatant Commander (COCOM) requirements across the full range of contingency operations..."⁴⁵ This modular capability will manage forward based stocks for all Services, similar to those positioned in support of OIF, and based upon the requirement, may provide a theater consolidation and shipping point module capable of managing container unloading, cross-docking of containers and pallets, consolidation and segregation services, and pallet building for both surface and air modes of transportation.

Early deployment of a deployable depot and theater consolidation and shipping point capability, provides a highly trained and experienced modular organization that is fully capable of establishing operations under the Army's Sustainment Command concept or a joint logistics command and control structure. The deployable depot concept is different from existing forward-based depot operations in that it will be capable of deploying into theater early, even when conditions are less than permissible, in order to establish early control and visibility of material flowing into the theater.⁴⁶ A DDC deployable depot assessment team, possibly attached to USTRANSCOM's Joint Task Force – Port Opening (JTF-PO), determines modular requirements and initiates coordination through the Sustainment Command - Theater for designation of operating areas and establishes a tie-in with other theater logistics capabilities. If deployed early in the campaign, i.e., shaping, seizing the initiative, or decisive operations, the deployable depot may require significant military personnel support. However, if the situation permits, the majority of the organization will most likely consist of a civilian workforce.⁴⁷

Training

The ad hoc nature of theater structures used in previous campaigns has negated the opportunity for meaningful collective training prior to commencement of operations. In most cases, Army units tasked to perform this critical function possess little to no experience handling large and complex distribution functions like those conducted on a daily basis at DDC facilities worldwide. Therefore, it is recommended that the Army and DDC establish a partnership to develop habitual training relationships between Sustainment Command – Theater units and selected DDC depot facilities located worldwide. This recommendation is in line with the Army's desire to establish a "joint focused program" that will "establish foundational experiences for soldiers, leaders, and units focusing on the ability to deploy and quickly execute their assigned missions in a joint, or even a combined, environment."⁴⁸ Sustainment Command units designed to support distribution operations should be designated to train periodically at DDC strategic distribution platforms located on the east and west coast of CONUS, or at OCONUS locations in Korea, Italy, and Germany. Additionally, a combined effort of Army SC (T) units and the DDC deployable depot should conduct periodic exercises in preparation for a validating training event conducted at a national training center. These training experiences will greatly enhance the overall proficiency and capability of theater distribution organizations and help to further address the issues associated with interoperability and overall efficiency.

Material

The deployable depot concept includes a self-contained command and control center that plugs into existing command and control structures. In addition to the command and control capability, the deployable depot modules include the communications, life support, and mission support equipment required to adequately support the depot and distribution center operations.⁴⁹ As the deployable depot concept matures, the DDC must also work closely with Joint Forces Command and the other services in order to fully synchronize the development of the Joint Distribution and Deployment System, a system capable of providing a true common operating picture for the entire theater distribution system. These material initiatives parallel the Army's modular unit design and support the Army's conceptual view that the "creation of joint organizations as a means of focusing capabilities and making efficiencies will increase and impact service structures."⁵⁰ In other words, the creation of joint distribution organizations like the deployable depot enable the Army to further consolidate and focus capabilities at the operational and tactical levels of the distribution pipeline.

Leadership and Education

In order to adequately develop a Joint Theater Logistics Management (JTLM) capability, the services and defense agencies must invest the time and resources required to develop leaders who are capable of operating in a widely diverse joint environment. Common-user and cross-servicing agreements will continue to prove highly beneficial in the future, however, the full development of highly trained joint theater logistics managers “gives the combatant commander or JTF commander the tools to oversee the management of logistics effectively, enabling the commander’s directive authority for logistics.”⁵¹ In the area of theater distribution, the Army should dedicate a portion of its junior officer and mid-level non commissioned officer training curriculum to Joint Theater Logistics Management. This leader development will go a long way in producing future leaders with a better understanding of joint capabilities and methods for integrating operational level logistics. Civil service training programs should also offer opportunities to further develop civilian mid-level and senior managers for future assignments in the area of joint logistics. In some cases, opportunities to combine both the civilian and military development programs should be explored.

Personnel

The proposed deployable depot and the theater consolidation and shipping point organizational structure includes a combination of civil service civilians, active military, and reserve component military.⁵² These positions should be augmented by the Army’s Sustainment Command structure when the operational environment limits the number of civilians in the theater due to security concerns, or if an operational surge demands increased capacity in the theater distribution system. Reserve component units assigned to the DDC are available to augment the deployable depot 30 days after initial active duty military are deployed. When it is not deployed forward, the deployable depot capability is integrated into DDC’s CONUS-based depot structure and maintains individual and collective proficiency via day-to-day distribution operations and participation in annual collective training events.⁵³ In some cases, contractors may be used to augment the deployable depot, or even operate one of the modules based on the operational environment and scope of theater requirements.

Facilities

Expanding selected DDC facilities and distribution related infrastructure is required to enable the required mission interaction between the Army’s Sustainment Command units and the DDC’s strategic distribution platforms. Facilities expansion should include additional office and work space that is sufficient to accommodate a small permanent core of active military and

DOD civilian personnel. Periodic training events conducted at selected DDC facilities would serve as building blocks to a larger training event at a national training center. Facilities should also accommodate separate storage for deployable command and control centers, material handling equipment, and containerized sets of mission support equipment.

Conclusion

The Defense Distribution Center, a subordinate Field Agency of the Defense Logistics Agency, should adopt an intra-theater logistics capability by leveraging its existing core competencies and employing them in the form of a deployable depot and theater consolidation and shipping point capability. If fully integrated with the Army's future force modular structure and joint focused logistics functional concepts, these capabilities can reduce the ad hoc nature of the theater distribution system and serve to significantly improve the theater distribution system at the operational level. The deployable nature of these capabilities will vastly improve theater logistics readiness and enhance the capacity, control, and visibility of the distribution pipeline from the national level of supply down to the transition point between the operational and tactical levels of logistics. Adopting this course of action requires that the Defense Distribution Center and the Army embark on a close partnership to further develop innovative resources and efficiencies for manning, training, and employing a world class theater distribution capability that meets the needs of each regional combatant commander.

Endnotes

¹ Joint Chiefs of Staff, *Joint Tactics, Techniques and Procedures for Joint Theater Distribution*, Joint Publication 4-01.4 (Washington, D.C.: U.S. Joint Chiefs of Staff, 22 August 2000), v.

² Ibid., viii.

³ Joint Chiefs of Staff, *Doctrine for Logistic Support of Joint Operations*, Joint Publication 4-0 (Washington, D.C.: U.S. Joint Chiefs of Staff, 6 April 2000), vi.

⁴ RAND Arroyo Center, *Sustainment of Army Forces in Operation Iraqi Freedom* (Santa Monica, CA.: RAND Distribution Services, 2005), xi.

⁵ United States General Accounting Office, *Desert Shield/ Storm Logistics*, (Washington, D.C.: General Accounting Office, November 1991), 30.

⁶ Ibid.

⁷ Ibid., 32.

⁸ United States General Accounting Office, *Defense Logistics: Preliminary Observations on the Effectiveness of Logistics Activities during Operation Iraqi Freedom*, (Washington, D.C.: General Accounting Office, 18 December 2003), 4.

⁹ RAND Arroyo Center, *Sustainment of Army Forces in Operation Iraqi Freedom* (Santa Monica, CA.: RAND Distribution Services, 2005), xi.

¹⁰ Scott Rosbaugh, *Developing and Leveraging DLA Supply Chains for Improved Support to Southwest Asia: Supply Chain Council Award for Supply Chain Operational Excellence* (New Cumberland, PA: February 2005), 2.

¹¹ Ibid., 4.

¹² Ibid.

¹³ Ibid., 8.

¹⁴ Ibid., 5.

¹⁵ Ibid., 4.

¹⁶ Ibid., 7.

¹⁷ Ibid.

¹⁸ Ibid., 9

¹⁹ Ibid.

²⁰ Ibid.

²¹ Thomas Kunisky, "Kuwait Monthly Cost Avoidance" briefing slides with commentary, New Cumberland, Defense Distribution Center, 23 February 2007.

²² Scott Rosbaugh, e-mail message to author, 27 February 2007.

²³ Rosbaugh, *Developing and Leveraging DLA Supply Chains for Improved Support to Southwest Asia*, 11.

²⁴ RAND Arroyo Center, *Sustainment of Army Forces in Operation Iraqi Freedom* (Santa Monica, CA.: RAND Distribution Services, 2005), 46.

²⁵ Ibid., 47.

²⁶ Ibid.

²⁷ Ibid.

²⁸ Rosbaugh, *Developing and Leveraging DLA Supply Chains for Improved Support to Southwest Asia*, 5.

²⁹ Ibid., 2.

³⁰ LTC Clayton T. Newton, "Fact Sheet: Theater Consolidation and Shipping Point," fact sheet prepared for the DDC Commander, New Cumberland, PA, 1 November 2005.

³¹ Ibid.

³² Defense Logistics Agency, *Theater Consolidation and Shipping Point Statement of Work: Section C – Descriptions and Specifications* (New Cumberland, PA: Defense Distribution Center, 2005), 8.

³³ Director of Operational Test & Evaluation, "Distribution Standard System," available from <http://www.globalsecurity.org>; Internet; accessed 31 December 2006.

³⁴ RAND Arroyo Center, *Sustainment of Army Forces in Operation Iraqi Freedom* (Santa Monica, CA.: RAND Distribution Services, 2005), 47.

³⁵ Department of Defense, *Focused Logistics Joint Functional Concept*, Version 1.0 (Washington, D.C.: U.S. Joint Chiefs of Staff, December 2003), 8.

³⁶ U.S. Army Training and Doctrine Command, *Distribution Operations for the Future Modular Force – Concept Capability Plan*, TRADOC Pam 525-4-XX (Fort Monroe, VA: TRADOC, 26 August 2006), i.

³⁷ Ibid.

³⁸ Department of Defense, *Focused Logistics Joint Functional Concept*, Version 1.0 (Washington, D.C.: U.S. Joint Chiefs of Staff, December 2003), 9.

³⁹ Thomas Kunisky, "Kuwait Monthly Cost Avoidance" briefing slides with commentary, New Cumberland, Defense Distribution Center, 23 February 2007.

⁴⁰ U.S. Army Training and Doctrine Command, *Distribution Operations for the Future Modular Force – Concept Capability Plan*, TRADOC Pam 525-4-XX (Fort Monroe, VA: TRADOC, 26 August 2006), 12.

⁴¹ Department of Defense, *Focused Logistics Joint Functional Concept*, Version 1.0 (Washington, D.C.: U.S. Joint Chiefs of Staff, December 2003), 10.

⁴² U.S. Army Combined Arms Support Command, *Modular Force Logistics Concepts, Version 4.0*, (Fort Lee, VA: CASCOM, 18 January 2006), 11.

⁴³ Ibid., 19.

⁴⁴ Defense Logistics Agency – Office of Operations Research and Resource Analysis, *Deployable Distribution Center*, Concept of Operations V2.0, (Fort Belvoir, VA: DORRA, 12 August 2005).

⁴⁵ Ibid., ii.

⁴⁶ Ibid.

⁴⁷ Ibid.

⁴⁸ U.S. Army Training and Doctrine Command, *Distribution Operations for the Future Force*, TRADOC Pam 525-4-01 (Fort Monroe, VA: TRADOC, 21 June 2004), 45.

⁴⁹ Defense Logistics Agency – Office of Operations Research and Resource Analysis, *Deployable Distribution Center, Concept of Operations V2.0*, (Fort Belvoir, VA: DORRA, 12 August 2005), B-1 to B-20.

⁵⁰ U.S. Army Training and Doctrine Command, *Distribution Operations for the Future Modular Force – Concept Capability Plan*, TRADOC Pam 525-4-XX (Fort Monroe, VA: TRADOC, 26 August 2006), 71.

⁵¹ Department of Defense, *Focused Logistics Joint Functional Concept*, Version 1.0 (Washington, D.C.: U.S. Joint Chiefs of Staff, December 2003), 13.

⁵² Defense Logistics Agency – Office of Operations Research and Resource Analysis, *Deployable Distribution Center, Concept of Operations V2.0*, (Fort Belvoir, VA: DORRA, 12 August 2005), 24.

⁵³ Defense Distribution Center, *DDXX Deployable Depot, Concept of Operations*, (New Cumberland, PA: DDC J-3, 5 June 2006), 2.

